

## Contributors to This Issue

VACLÁV E. BENEŠ, A.B., 1950, Harvard College; M.A. and Ph.D., 1953, Princeton University; Bell Telephone Laboratories, 1953—. Mr. Beneš has been engaged in mathematical research on stochastic processes, traffic theory, and servomechanisms. In 1959–60 he was visiting lecturer in mathematics at Dartmouth College. Member American Mathematical Society, Association for Symbolic Logic, Institute of Mathematical Statistics, Society for Industrial and Applied Mathematics, Mind Association, Phi Beta Kappa.

J. WILLIAM ELEK, B.S., 1957, Case Institute of Technology; M.S., 1961, Lehigh University; Bell Telephone Laboratories, 1958—. He has worked on the mechanical reliability and environment of electron tubes and semiconductors. He also has engaged in the investigation of thermal stresses induced in electron tubes and semiconductors as a result of fabrication techniques. At present he is studying the mechanical (shock and vibration) environment of electron tubes and semiconductors to improve reliability. Member Tau Beta Pi, Sigma Xi.

JOHN S. ELLIOTT, JR., B.S., 1922, Pennsylvania State College; Bell Telephone Laboratories 1922—. His first assignment was spent in routine measurements; condenser (mica paper) development and design; development of precision testing equipment and apparatus used in measuring the various electrical constants of transmission apparatus. In addition, during World War II he was responsible for the production of numerous direct capacitance test sets urgently needed by vacuum tube manufacturers in controlling the performance of vacuum tubes. Member Eta Kappa Nu, Alpha Sigma Phi.

HANS L. KREIPE, Dipl. Ing., E. E., 1960, Technische Hochschule, Braunschweig, Germany. Scientific Assistant at the Institut fuer Hoechst frequenztechnik, Technische Hochschule, Braunschweig 1961—. Mr. Kreipe is presently engaged in research in microwaves.

DIETRICH MARCUSE, Diplom Vorpruefung, 1952 and Dipl. Phys., 1954, Berlin Free University; Siemens and Halske (Germany), 1954—

1957; Bell Telephone Laboratories, 1957—. At Siemens and Halske Mr. Marcuse was engaged in transmission research, studying coaxial cable and circular waveguide transmission. At Bell Laboratories he has been engaged in studies of circular electric waveguides and work on gaseous masers. Member I.R.E.

STEPHEN O. RICE, B.S., 1929, D.Sc. (Hon.), 1961, Oregon State College; Graduate Studies, California Inst. of Tech., 1929-30 and 1934-35; Bell Telephone Laboratories, 1930—. In his first years at the Laboratories, Mr. Rice was concerned with nonlinear circuit theory, especially with methods of computing modulation products. Since 1935 he has served as a consultant on mathematical problems and in investigation of telephone transmission theory, including noise theory, and applications of electromagnetic theory. He was a Gordon McKay Visiting Lecturer in Applied Physics at Harvard University for the Spring, 1958, term. Fellow I.R.E.

JAMES D. RINEHART, B.S., 1957, South Dakota School of Mines and Technology; M.E.E., 1959, New York University; Bell Telephone Laboratories, 1953—. Mr. Rinehart was first engaged in systems engineering of a pulse code modulated carrier system. At present he is supervisor of a group concerned with studies of satellite communications systems. For Project Telstar he was responsible for evaluating various satellite orbits and determining the orbit which best satisfied the objectives of the experiment. Member Sigma Pi Sigma Physics Honor Society.

THOMAS D. RINEY, B.S., 1950, University of Dayton, M.S., 1952, Ph.D., 1954, Purdue University; Bell Telephone Laboratories, 1954-1960; General Electric Space Sciences Laboratory, 1961—. While at Bell Laboratories, he was engaged in work on photoelastic and theoretical studies of stresses in glass seals and other glass structures, such as electron tube envelopes. Later he was engaged in work on heat transfer problems involving klystrons and magnetrons, and design of transistor encapsulation for high pressure applications. Still later, he studied heat transfer associated with semiconductor devices and problems of infrared photoelasticity and thermal stress analysis. Member of Sigma Xi, American Mathematical Society, Society for Experimental Stress Analysis, Society for Industrial and Applied Mathematics.

MARILYN F. ROBBINS, B.A., 1960, Douglass College, Rutgers University; Bell Telephone Laboratories, 1960—. Mrs. Robbins has been

engaged in various studies pertaining to satellite communications, including work for the Telstar experimental satellite program.

W. ROSENZWEIG, B.S., 1950, Rutgers University; M.S., 1952, University of Rochester; Ph.D., 1960, Columbia University. Brookhaven National Laboratory, 1951-1953; Radiological Research Laboratory, Columbia University, 1953-1960; Bell Telephone Laboratories, 1960—. At Bell Laboratories, Mr. Rosenzweig has been mainly engaged in studies of radiation damage to semiconductors. Member American Physical Society, Radiation Research Society, Sigma Xi, Phi Beta Kappa.

IRWIN W. SANDBERG, B.E.E., 1955, M.E.E., 1956, and D.E.E., 1958, Polytechnic Institute of Brooklyn; Bell Telephone Laboratories, 1958—. He has been concerned with analysis of military systems, particularly radar systems, and with synthesis and analysis of active and time-varying networks. Member I.R.E., Eta Kappa Nu, Sigma Xi, Tau Beta Pi.

HANS-GEORG UNGER, Dipl. Ing., 1951 and Dr. Ing., 1954, Technische Hochschule, Braunschweig (Germany); Siemens and Halske (Germany), 1951-55; Bell Telephone Laboratories, 1956—. His work at Bell Laboratories has been in research in waveguides, especially circular electric wave transmission. He is now on leave of absence from Bell Laboratories while professor of electrical engineering at the Technische Hochschule in Braunschweig. Senior member I.R.E.; member German Communication Engineering Society.

